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ELABORATED AND RESTRICTED CODES: THEORY AND PRACTICE

by

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "Elaborated and Restricted Codes: Theory and Practice," submitted by Janette M. Fox in partial fulfillment of the requirements for the degree of Master of Education.

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ABSTRACT

The main aim of this study was to critically evaluate Bernstein's hypothesis regarding elaborated and restricted codes, and to examine the feasibility of using this differentiation in language code usage to determine if an individual child's language could be classified as elaborated or restricted. Bernstein's position is discussed in relation to the issues of the significance of language, linguistic relativity and importance to education.

A variety of studies which used Bernstein's hypothesis have been critically examined and inconsistencies and discrepancies noted. A methodology for studying individual children is presented and suggestions for further research in this direction are proposed.

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CHAPTER I

INTRODUCTION

Significance of Language

Cassirer aptly describes man as animal symbolicum, the animal that creates symbols and builds a world of symbols. He states (1946, p. 25):

> No longer in a merely physical universe man lives in a symbolic universe. Language, myth and religion are parts of this universe. They are the varied threads which weave the symbolic net, the tangled web of human experience.

By language, the reference is to that system of symbols that has developed beyond expressive sounds and gestures, beyond signal systems that operate within a concrete situation, beyond mere indicatign of emotional states and intentions, and has begun to articulate itself in a system of symbols that belong to the human world of meaning (Schmidt, 1973).

The complex communication system, language, is often considered to be a distinguishing factor separating man from other animals. According to Luria, language enables an individual to acquire the accumulated experience of previous generations. Such experience is greater not only in quantity, but also deeper and more complex than individual experience. Moreover, as the child learns to subordinate himself to language, it will begin to act as a regulator of behavior, and give him new forms of attention, memory, imagination,

thought and action (Luria and Yudovitch, 1959). According to Bain (1973, p. 1), in the process of learning a language, "a child is not merely acquiring a store of words or an ability to understand and use certain sounds, he is also acquiring a certain mode of cognition, the linguistic, that forms the symbolic background against which all phenomena, symbolic and non-symbolic are experienced".

Language occupies a very special place in the development of the child. Schmidt states (1973, p. 62):

> . . . access to language presupposes active participation and involvement in a world of shared human meanings and in the culture of the group to which the child belongs, and is therefore central to the child's 'socialization' and 'enculturation'. It affects the child's emotional development, because linguistic expression transforms emotional experience. It affects the child's cognitive development, because language not only follows but also anticipates and guides cognitive activity. Finally, defective development of speech and language, whatever it's cause . . . means much more than a deficit in one function of a biological organism: it always involves for the child the risk of missing the specifically humanizing aspect of human development.

Vygotsky (1962) felt that in the later development of the child's intellect, the speech structures mastered by the child become the basic structures of his thinking. Thought is not merely expressed in words, it comes into existence through them. In other words, thought development is determined by language: by the linguistic tools of thought and by the socio-cultural experience of the child. Since a child is born into a particular society, in a particular point in time (Schmidt, 1973) the inter-relationship between

language and the socio-cultural experiences of the child is a basic consideration in examining the child's use of language.

Linguistic Relativity

The degree to which social and cultural influences determine the resultant speech of an individual is not clear. Bernstein proposes that forms of spoken language in the process of their learning, elicit, reinforce and generalize distinct types of relationships with the environment and thus create particular dimensions of significance. That is, speech marks out what is relevant-- affectively, cognitively, and socially-- and experience is transformed by that which is made relevant.

The concept that a person's use of language imposes limits on his perception of the world and his subsequent behavior, is termed linguistic relativity. Sapir (1921) states that the real world is to a large extent built unconsciously on the language habits of the group. That is, different societies exist in distinct worlds, not the same world with different labels attached, consequently language habits of a community predispose certain choices of interpretation. Benjamin Whorf (1956) claims we cut up nature, organize it into concepts and ascribe signicicances as we do, largely because of the obligatory patterns of our language.

The positions of Sapir and Whorf represent the extreme view of linguistic relativity. Many theorists, including Bernstein, support a weaker position regarding the relationship between language and social and cultural factors in that such factors influence a person's language, rather than determining it.

The main emphasis in Sapir and Whorf's positions is upon inter-cultural differences in language usage. Another way of looking at cultural and social influences on language use, is to examine intra-cultural differences. Lawton (1968) states that it is not just differences between languages that is of interest, but rather a question of range within a language, or control over the potentialities available in one language, i.e., that restriction in the control over a language involves a restricted view of the universe, a restricted mode of thinking, a restricted ability to benefit from educational processes.

This is essentially the position held by Vygotsky when he states that the speech structures the child masters become the basic structures of his thinking. Bernstein in particular, is interested in intra-cultural differences in language usage. This is the basis for his theoretical position regarding the existence of socio-linguistic codes. Bernstein argues (1971b, p. 125):

> . . . a number of fashions of speaking, frames of consistency are possible in any given language and that these fashions of speaking, linguistic forms, or codes,

> are themselves a function of the form social relations take. According to this view, the form of the social relation, or more generally, the social structure, generates distinct linguistic forms or codes and these codes essentially transmit the culture and so constrain behavior.

These different language forms, or codes, Bernstein suggests, constitute more than dialectical differences. He states (1958, p. 161):

> Language exists in relation to a desire to express and communicate; consequently the mode of a language structure-- the way in which words and sentences are related-- reflects a particular form of the structuring of feeling and so the very means of interaction and response to the environment.

Children with different social backgrounds in the British class system will, according to Bernstein, develop different ways of looking at the world, and different ways of structuring their linguistic resources. The lower class child's inability to exploit the formal possibilities of language as given by syntax, grammatical distinctions and the use of functors is of special significance to Bernstein. In his words, these children use a <u>restricted</u> code whereas children from middle class homes who are able to use their language to express explicit meanings through verbal expression, use an <u>elaborated</u> code. The characteristics of language used are, of course, related to the function of speech, and it is the analysis of this function that makes Bernstein's work particularly relevant.

Functions of Language

Bernstein is interested in the relationship between the function and structure of language in the child's early years and the development of intellectual abilities relevant to school. The divergent patterns of scholastic achievement between lower and middle class children led Bernstein to analyze the function and structure of language in different social settings. For the lower class child, language reinforces group values and he is not encouraged to look for causes, effects, or for wider implications in language.

The middle class child however, is encouraged to understand the reasons for and consequences of acts. Lower class children characteristically have difficulty in learning to read and to work with language, and have problems maintaining interest and following up implications of what they are experiencing or observing. After the first few years of school, when the work becomes more abstract and symbolic, these children tend to lose interest as the subject matter goes beyond their sphere of capability. According to Bernstein (1959, p. 312):

> Language is considered one of the most important means of initiating, synthesizing and reinforcing ways of thinking, feeling, and behavior which are functionally related to the social group. It does not of itself prevent the expression of specific ideas or confine the individual to a given level of conceptualization, but certain ideas and generalizations are facilitated rather than others, that is, the language use facilitates development in a particular direction rather than inhibiting all other possible directions.

In other words, language tends to direct the expression of ideas.

Bernstein extensively discusses the regulative function of speech, that is, to what extent language regulates or constrains behavior. This is not the only function which could be examined, Luria lists a total of four: communicative, semantic, reference, and regulative. Language not only serves as a vehicle for communication, it conveys meaning through a set of syntactical and grammatical elements and serves as a frame of reference to express individual experience. No study of language can totally ignore these functions, and in the process of examining the regulative function, Bernstein has cause to touch on all of the functions. In discussing the socio-linguistic codes, Bernstein makes reference not only to what restrictions the language use might have on behavior, but also to the communicative, semantic and reference functions of language.

Elaborated and Restricted Codes[1]

In Bernstein's view, communication is much more than knowing the words of a language, it is being able to use the elements of speech in a way that expresses meaning. Ideally, a communication should have the same meaning to both the producer and receiver of a message. At times, this means that the phrasing of a message has to be very clear, explicit

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[1]This section is a general description of Bernstein's position. Specific references have been omitted. The main texts are Bernstein (1971b, 1972).

and direct in order to insure that the meaning has been transmitted as intended. At other times, there is little need for explicit phrasing because much of the meaning is taken implicitly or is expressed through para-linguistic signals such as facial expressions, gestures and the rhythm, stress and pitch of the speech. These two modes of expression represent the two general types of speech systems in Bernstein's typology of socio-linguistic codes: elaborated and restricted codes.

These two codes may be distinguished by the extent to which each facilitates (elaborated) or inhibits (restricted) an orientation to symbolize intent in a verbally explicit form. Utterances in a restricted code will tend to contain a high proportion of short commands, simple statements and questions where the symbolism is descriptive, tangible, concrete, visual and of a low order of logical implications. In contrast, elaborated speech will tend to be rich in personal, individual qualifications and its form implies sets of advanced logical operations: non-verbal means of expression will be a secondary importance. According to Bernstein, it is sensitivity to this form of language rather than extensive vocabulary which is important and which develops into an inclination to verbalize an awareness of separateness and difference.

Different people use their linguistic skills in a variety of ways to express their thoughts and feelings.

Even those who rely mainly upon extra-verbal signals, will vary their use depending upon whom they are addressing. Some people express themselves best by describing their experiences in highly explicit verbal terms, while others may move freely between elaborated and restricted speech depending upon the situation. Bernstein proposes that behavior processed by these codes will develop different modes of self-regulation and so, different forms of orientation. The codes are seen to be functions of a particular form of social relationship, or more generally, qualities of social structures.

These two speech systems may be compared at two levels: linguistic components of communication, and extra-verbal components. The linguistic components refer to messages in which the meaning is mediated by words: their selection, combination and organization. Extra-verbal components on the other hand, include such things as gestures, physical set, facial modification and the mode of presentation including the pitch, stress and rhythm of the speech.

Linguistically, these codes can be defined in terms of the probability of predicting the syntactic elements used in organizing meaning across a representative range of speech by any one speaker. The speaker of an elaborated code selects from a relatively extensive range of alternatives and the probability of predicting the organizing elements is small. The speaker of a restricted code, selects from a

relatively limited range of syntactic elements and the probability of predicting these elements is much greater. In terms of prediction, a restricted code in the pure form is one in which all the words (lexicon) are wholly predictable for speakers and listeners. Individual difference is transmitted through variations in extra-verbal channels, and not through verbal signals. Examples of the use of restricted codes would be ritualistic modes of communication such as types of religious services, relationships regulated by protocol, cocktail parties and story-telling situations.

Restricted codes are predictive on the syntactive level as well as the lexical. In such a case, the lexion may vary from one case to another, but it is drawn from a narrow range. It should be made clear that though a lexicon may be drawn from a narrow range, it is not necessarily a restricted code. The most general condition for the emergence of this code is a social relationship based upon a common, extensive set of closely-shared identifications and expectations self-consciously held by the members of that group. For example, a restricted code will arise in prisons, combat units, in the peer groups of children and adolescents, etc. Speech in such situations is refracted through a common cultural identity, reducing the need to verbalize explicit intent, and resulting in a simplified speech structure and a narrow lexicon.

In a restricted code, how and when things are said is more important than what is said. Meanings are likely to be concrete, descriptive or narrative rather than analytical or abstract. Speech in these social relations is likely to be fast and fluent, articulatory clues are reduced; some meanings are likely to be dislocated, condensed, and local; there will be a low level of vocabulary and syntactic selection; the unique meaning of the individual is likely to be implicit.

Although restricted codes may be functions of a particular form of social relationship, they are not necessarily linked to social class. They are used by all members of a society at some time. By restricting the verbal signalling of individual experience, and expanding the use of non-verbal signals, a restricted code defines and reinforces the form of the social relationship. This does not mean that the amount of speech is affected, but the form in which the speech appears.

An elaborated code in contrast to a restricted code, contains very little predictability on either the lexical or syntactical level. Such a code is likely to arise in a social relationship which requires its members to select from their linguistic resources, highly specific verbal descriptions. The person's intent is usually not taken for granted, as it is among users of a restricted code, but rather meanings have to be expanded and raised to a high level of verbal

explicitness. The major function of this code is to prepare and deliver relatively explicit meaning. This requires a higher level of syntactic organization and lexical selection. Bernstein notes that if a restricted code facilitates the construction and exchange of communalized symbols, then an elaborated code facilitates the verbal construction and exchange of individualized or personal symbols.

A restricted code is particularistic with reference to its meanings, that is, meanings are often implicit and relatively less conventionalized through language. Non-members of the group may not be able to understand the meaning. However, a restricted code is universalistic with reference to its models, which means that all people have access to one or more forms of a restricted code, and its local condensed meaning. An elaborated code on the other hand, is universalistic with reference to its meanings and particularistic with reference to its speech models. Meanings are quite explicit, and are meant to be understood by anyone conversant with the language whether or not he belongs to the speaker's particular group: they summarize general social means and ends. Only some people have access to the code and to the potential universalic character of its meanings.

In an educational system which emphasizes verbal fluency and explicit expression of ideas, the child who is not able to use an elaborated code could be at a great disadvantage. Although Bernstein has linked social class to

linguistic code usage, he does not mean that an elaborated code is beyond the means of a lower class child. Rather, Bernstein contends that social structure does not prevent the expression of specific ideas or confine the individual to a given level of conceptualization but facilitates development in a particular direction. This should be a matter of concern to educators since it implies that children could be oriented towards using an elaborated code in school regardless of social class.

CHAPTER II

EDUCATIONAL IMPLICATIONS

Social Class and School Performance

Bernstein is interested in the relationship between the function and structure of language in the early years of the child's development and the growth of the intellectual abilities that are relevant to success at school. He has found that lower class children in the British context are likely to have difficulty in learning to read and with language work, their interest is aroused by novelty, but it is difficult to interest them for long in following up implications of what they are observing or experiencing. For the first five or six years in school, the child's scholastic performance may not be lower, but when the school begins to demand a more abstract symbolic approach, the child who cannot use an elaborated code will be out of his depth and fall behind.

Bernstein's contention that social structure does not prevent a person from attaining a given level of conceptualization but facilitates development in a particular direction, is integral to his position. A similar sentiment is expressed by Vygotsky (1962) concerning the environment and mastery of language. The implication is, that mastery of elaborated as well as restricted codes is not only possible,

but could lead to new ways of organizing and responding to experience for the individual. Bernstein points out however, that the distinguishing factor between restricted and elaborated codes is more than vocabulary; it is a different way of organizing meaning and experience.

What is made available for learning by an elaborated code is of a different order than for a restricted code. According to Bernstein, by learning, the reference is to what is significant, what is made relevant: socially, intellectually and emotionally. As a child learns an elaborated code, he very early learns to orient toward verbal expression of his thoughts. A child who is limited to a restricted code will tend to develop essentially through the inherent regulations of that code. Where the user of an elaborated code develops a theoretical attitude toward the structural possibilities of sentence organization and verbal planning, the user of a restricted code has a limited level of syntactic organization and there is little motivation or orientation toward increasing vocabulary. The use of qualifiers (adjectives, adverbs, etc.), is limited and often rigid in selection. There is a limited range of syntactical possibilities making it difficult to convey logical sequences (the logic may be implicit, but the expression of the logic in linguistic terms is missing). Lack of verbal planning results in a high degree of redunancy. Role relations may be limited and code switching hampered. For instance, an

individual limited to a restricted code will tend to mediate an elaborated code through the regulations of his own code.

Children who have access to different speech systems may adopt quite different social and intellectual procedures despite a common potential. According to Bernstein, all children have access to restricted codes since they are universalistic, but not all appear to have access to elaborated codes and the high level of syntactic and lexical organization which they entail. This means that certain avenues are closed to some children due to the fact that they do not have access to elaborated speech. As more and more emphasis is placed upon explicit verbal expression in a culture, these children become further removed from areas requiring explicit verbal communication skills. For these children, the door is closed not through choice, but by the mode of expression with which they are raised.

A restricted code can arise at any point in society where its conditions may be fulfilled, but a special case that Bernstein is especially concerned about is that in which the person is limited to this code. In such a case, the consequences are thought to be relevant to the problem of educability in developed or emergent industrialized societies. In such societies, much emphasis is placed upon verbal explicitness. If a person lacks access to elaborated speech in the society, he is restricted in the roles he can play in that society, since the ability to switch codes is related

to the ability to switch roles (Bernstein, 1971b).

Although each code possesses it's own possibilities, society places different values on the kind of experience elicited, maintained, and strengthened through the different coding systems. Success in many societies is associated with the ability to use an elaborated code. Social class is a crude indice for the codes, but variations often will appear in a mobile society. Bernstein notes that children from middle class homes often possess both an elaborated and restricted code, while lower class children tend to be limited to a restricted code. If a child is to succeed as he progresses through school, it becomes critical for him to possess or be oriented toward an elaborated code. The relative backwardness of many lower class children could be a form of culturally induced backwardness transmitted by the linguistic process.

The code the child brings to school symbolizes his social identity relating him to his family and community. The code the child uses orients him progressively toward a pattern which is reinforced every time he speaks. The orientation toward either of these codes may be independent of the child's native ability, but may be governed entirely by the form of his social structure. According to Bernstein (1961a) the role intelligence plays is to enable the speaker to exploit more successfully the possibilities symbolized by the socially conditioned linguistic forms. The social and

intellectual mechanisms by which individuals relate to the environment may be a question of the codes their speech models use (family, peers, etc.).

Home Values Versus School Values

For the middle class child, the school does not clash with the values of the home, the child's level of curiosity is generally high and his ability to switch from restricted to elaborated speech gives him sensitivity to role and status and enables him to behave appropriately in a wide range of social circumstances. For the lower class child, the school values often clash with those of the home. Bernstein claims that the working class child comes from a less formally organized family structure with a less clear view of the universe in terms of space and time; authority often appears arbitrary, and long-term goals are less likely than immediate gratification because the general notion of future is vague. The language between parent and child contains few personal qualifications and employs concrete symbolism. This exclusive use of restricted language tends to limit the verbal expression of ideas and feelings, and to limit cognitive differentiation. Bernstein (1958) points out that, as a result, the lower class child will have difficulty communicating with the teacher on the teacher's own level. There is a clash between the child's accustomed immediate responses and the mediate responses required by the school, and there is

difficulty in dealing with abstract concepts such as mathematics.

Value of an Elaborated Code

The problem for the restricted code user becomes acute at the secondary level when the discrepancy between what he can do and what he is called upon to do, widen. This is because the educational curriculum begins to rely more upon symbolic and analytical tasks, and the restricted code user does not have access to the linguistic forms to work with these problems. Bernstein points out that if a child is sensitive to an elaborated code, the school experience is one of symbolic and social development, whereas for the child limited to a restricted code, the school experience is one of symbolic and social change. Consequently, in a society which places emphasis on an elaborated code, the educational system carries some alienating tendencies.

A factor which is of particular concern to educators in industrialized societies, is the ease with which either code can be learned. There appears to be a difference in the rate these types of code can be learned. The syntax of a restricted code can be learned quickly, but the greater range of selection from the syntactical choices of an elaborated code usually require a longer period of formal and informal learning.

Where children are limited to a restricted code, teachers can expect a major problem of educability whose source lies not so much in the genetic code, but in a culturally determined communication code (Bernstein, 1971a). Children who have a restricted code have learned a code where extra-verbal signals are a major channel of communication. This does not mean that their speech output is reduced, but that the amount of verbal planning involves a rigidity of syntactic organization not found in an elaborated code.

Although a code is restricted it does not mean that the user is not aware that elaborated speech variants exist, only that such variants will be used infrequently in the process of socialization of the child in his family. All children have access to restricted codes and their various systems of condensed meaning. Although a culture generates a restricted code, the resultant speech and meaning system of the child is not necessarily linguistically or culturally deprived, but the child possesses a different orientation to the possibilities of linguistic organization.

A restricted code should not be disvalued. It carries its own aesthetic, it contains a metaphorical range of considerable power, a simplicity and directness, a vitality of rhythm. It unites the speaker to his family and community through a particular form of communication. An elaborated code simply allows for more diversity of syntactic organization,

a more explicit expression of ideas and a more exact and wider use of the lexicon. The problem for educators is not that they have to teach the restricted code user a formal grammar, but they have to make elaborate forms available to the child. There is nothing in the dialect per se which prevents a child from internalizing and learning to use universalic meanings.

Compensatory Education

The introduction of the child to elaborated forms of thought is, in Bernstein's view, not compensatory education, it is the purpose of education. An accepted educational principle is to work with what the child has to offer. The teacher needs to understand the child's use of language rather than trying to change it, since the symbolic world of the middle class child is not appropriate for all children in a classroom. Bernstein feels that teachers need to be sensitive toward the language requirements (cultural and cognitive) of the formal education process, and to be able to understand and work with the child's language.

A teacher working with what the child has to offer, can help that child by exposing him to the language requirements of elaborated speech without changing his dialect. According to Bernstein (1969), the symbolic world of the middle class is not appropriate for all children in a classroom, it does not form a link with these children's lives

outside the classroom. The key is to make elaborated speech forms available to the child, to give him access to a wider range of roles and greater opportunity to mold his own future in a society. If a person chooses not to use elaborated speech, that is his decision, but not to be able to make that choice closes the door for children who have not obtained access to elaborated speech forms.

It is not surprising that Bernstein (1960) has found that children who lack access to elaborated speech will perform at a lower level on school tasks involving verbal skills than their peers who have access to elaborated forms. This apparent association between success and language code usage is of particular interest for several reasons.

Most obvious, is the fact that access to elaborated speech may not guarantee success, but lack of an elaborate code appears to preclude social achievement. Of most importance to the child who is limited to a restricted code, he may find himself in a school situation he cannot cope with because he doesn't have the verbal skills necessary. Once he falls behind his peers he is likely to develop a negative view of himself and his abilities. His teachers may begin to treat the child as a slow learner which further perpetuates the child's negativism. School can be a very bitter experience for some children if no one takes the time to ascertain their linguistic skills. It would appear that the sooner a child is able to use an elaborated code in

school, or to be exposed to the complex syntactical and lexical organization that an elaborated code entails, the more likely he is to achieve as well as other children in the school of similar intelligence.

Schmidt presents Bernstein's position regarding the importance of education most succinctly. He states (1973, p. 135):

> Bernstein believes, and argues very plausibly, that the real barrier to learning at school for the lower-class child lies in the fact that his experience has not provided him early and consistently, with ways of specifying, differentiating, and generalizing personal experience, or even with the desire to do so. The 'elaborated code' the school tries to teach, is largely meaningless to him because he does not appreciate or value its function.

This does not mean that the teachers can do nothing about it, but that they have to learn how to make language function in a new way for these children. The highly personal experiences of the child who is limited to a restricted code must be transformed into language: language which symbolizes these feelings and experiences. These children must learn to plan their thoughts and organize them into logical linguistic sequences.

CHAPTER III

RESEARCH LITERATURE

Bernstein has postulated the existence of two speech codes, elaborated and restricted: the lower class tending to be confined to a restricted code, whereas the middle class switches from one to another according to context. These two codes are considered to be generated through the use of different verbal planning procedures which vary in syntactic selection and mean pause duration per word. The two codes are also differentiated by the use of non-linguistic cues.

The theory as such, is open to experimental investigation in several areas including: how the verbal planning procedures operate (encoding and decoding); the nature of the non-linguistic differentiation such as hesitation phenomena, facial expression, gestures, physical set, etc.; and inter-code differences in the use of linguistic elements such as the use of personal pronouns, uncommon adjectives subordinate clauses, use of adverbs, passive versus active verbs, range of vocabulary and the degree to which abstract structures are used.

The hypothesis that use of the codes is highly correlated with social class is basic to the theory. Another basic idea, is that lower class members need not be limited

to a restricted code. That is, an elaborated code can be learned. If this can be shown to be true, there are implications for teaching in the theory.

Clearly, there are many areas open to investigation in Bernstein's theory. Some topics have been researched more than others. In the following section, the intention is to examine many of these studies and evaluate their effectiveness in putting Bernstein's theoretical position to test. For convenience, these studies have been grouped according to the area of Bernstein's theory that they discuss.

Encoding and Decoding (Verbal Planning)

In an early paper, Bernstein (1962a) defines the sense in which the word code is used. When person A signals to B, Bernstein suggests that B orients to the message and scans the incoming message for a pattern of dominant signals, associates signals and selects from the signal store then organizes the signals to produce a reply. The term code as used by Bernstein implies the principles which regulate these processes. According to Bernstein (1962a, p. 35):

> It follows that restricted and elaborated codes will establish different kinds of control which crystallize in the nature of verbal planning. The latter is a resultant of the conditions which establish the patterns of orientation, association, and organization. The originating determinants of this trio would be the form of the social relationship or more generally the quality of the social structure. This would allow the following postulate: the form of the social relationship acts selectively on the type of code which then becomes a symbolic expression of the relationship and proceeds to regulate the nature of the interaction.

This part of Bernstein's theory is a representational model, and as such is not open to experimental investigation. It is meant to be a descriptive device rather than explanation. The studies which have dealt with verbal planning procedures have concentrated upon the observable phenomena of word usage in encoding and decoding. The emphasis is upon actual language behavior rather than testing a hypothetical representation of the process of encoding and decoding.

These studies examine the nature and extent of the differences in verbal behavior of members of the working-lower class and middle class. Taylor (1953) suggests that word predictability techniques are useful for gauging the correspondence of language habits between groups. The procedure which Taylor introduced to measure the differential language habits is referred to as cloze. This procedure involves deleting every n-th word in a language transcript, then having a decoder fill in the blanks. The decoders are judged for their success in approximating the language habits of the original encoders.

One of the first studies to test the Bernstein hypothesis using a modified form of Taylor's technique, was Robinson (1965a). Rather than restricting the test materials to standard sentences, Robinson collected a set of sentences which he considered representative of the speech of elaborated and restricted code users. Also, instead of deleting every n-th word, Robinson chose to delete words in varying positions

in order to ensure a range of parts of speech. The deletions were comprised of nouns (4), adjectives (4), verbs (4), prepositions (4), and conjunctions (2), selected in pairs from working and middle class boy's letters with equal numbers from formal and informal letters.

Spoken utterances were collected from two tape-recorded four person discussions, one of middle class boys and one of working class boys.

An interesting feature of Robinson's test was that subjects were encouraged to list several words appropriate to the deletions, which could have the effect of increasing the number of test items without increasing the number of sentences. Middle class boys were in general using a larger range of words than working class boys, and the concordance in the vocabulary of the two groups was greater for function words and less for content words. Function words include prepositions, determiners, conjunctions, auxilaries, etc., while content words include nouns, verbs, adverbs and adjectives.

There are some problems involved in using this procedure to differentiate verbal planning procedures for the two groups, however. An expected difference of greater working class conformity of response to working class spoken utterances was not found. This could mean that working class spoken utterances may be treated differently by the two groups. While working class boys may put in words they would normally

use, the middle class boys may be using a sterotype of what they expect working class language to be. The result would be that both groups would be responding in a restricted code but for different reasons. The lower class would be using a restricted code because they are limited to it, while the middle class group could be using a restricted code to fit words into the context of a restricted speech sample.

There is an assumption in Robinson's organization of the study that speech is comparable to written language. However, in conversation, there is pressure to act quickly to maintain the flow, which makes speech more difficult to amend than writing. In writing, a person can take more time to think out an answer and is also required to express those thoughts in words rather than gestures. Fewer differences between written language for lower class and middle class groups may be a result of lower class children being able to amend their responses and consequently bringing them closer to the level of the middle class responses.

Another difficulty in Robinson's study is his use of the cloze procedure. Robinson used single sentences for the deletions, whereas Taylor specifically stipulates that cloze is not a sentence completion test, but a test dealing with contextually inter-related series of blanks. In consequence, Robinson's test does not actually sample language patterns in complete message systems.

A cloze procedure is used in a more recent study by Poole (1972), to examine differences in working class and middle class speech. On the basis of Bernstein's postulate that the structural and lexical elements are highly predictable for restricted codes and much less so for elaborated codes, Poole hypothesized that (1) oral middle class messages are less predictable than oral working class messages, and (2) subjects tend to agree on the word selected to fill the working class messages whether or not the word is the correct response.

Using a modified cloze procedure, Poole gave the subjects a transcript with the first and last paragraph intact, with the remainder of the paragraph containing 100 deletions: 50 lexical and 50 structural. It was found that middle class messages were generally more difficult to predict, and that working class message systems were more predictable and stereotyped. Bernstein's dimension of predictability is given some empirical support by this study, but there appears to be a need for more research to confirm these findings.

The problems in Robinson's study have not been solved in Poole's study by making the cloze procedure ressemble Taylor's technique more closely. It still is not clear whether middle class subjects respond in a stereotyped way to working class messages because they use the words they think working class boys would use, or whether they are using restricted codes.

These two studies also present problems in comparison since the samples were different with respect to age, sex, method of selection and location of the study. Robinson used only boys ages 12 years, selected from schools in England. Poole used first year university students of both sexes at a university in Australia. That such different samples both gave some support to Bernstein's hypothesis does give some credence to the generality of social class language code differences in encoding and decoding of messages.

A study dealing with the use of cloze tasks to examine the language of culturally disadvantaged children was conducted by Williams and Wood (1970). This study examined language samples of junior high school Negro girls of low and middle socio-economic-status, using Taylor's technique. The hypothesis was that middle class children can readily approximate the language of both lower and middle class children, but that the lower class children would only be able to approximate well the language of other lower class children.

Oral language samples were obtained in much the same way as Robinson, through formal and informal group discussions. The actual test, however, consisted of language passages (rather than sentences like Robinson's test) which had every fifth word deleted. Socio-economic-status differentiation was based upon information obtained from the

Chicago Board of Education and by area of residence.

Results of the study indicated that the middle class students could readily approximate the language of the middle and lower class samples, but the lower class students did significantly more poorly in approximating the language of the middle class students, although they performed as well as the middle class children in approximating language in samples from students of their same social status. These results are quite similar to those of Robinson who was testing 12-13 year old boys in England. In that study, Robinson noted a difference between the lower and middle class groups in the agreement of vocabulary for function and content words.

Poole (1972) on the other hand, concentrated upon a differentiation between lexical and structural elements in the deletions. The basis for this approach rests on the postulate that for restricted codes, the structural and lexical elements are highly predictable, while the opposite is true for elaborated codes. In terms of lexical and structural predictability, Poole found that middle class messages were generally more difficult to predict. Conversely, working class message systems were predictable and stereotyped.

Williams and Wood (1970) scored their data along similar lines, differentiating between replacements of words of the lexical classes (nouns, verbs, adverbs, adjectives,

etc.) and those of the functional classes (prepositions, conjunctions, determiners, auxiliaries, etc.). According to Williams and Wood, replacement of lexical items is far more related to the semantic constraints of the decoding situation than is the replacement of functional items, which are more a reflection of structural constraints. Results indicated that samples from the lower class encoders were generally more predictable (or redundant) as a whole, than were the samples from the middle class encoders. Where Robinson claimed that differences found between the lower and middle class samples were of vocabulary in use, Williams and Wood inquired into whether the differences in language approximations were largely due to vocabulary, or to vocabulary as well as structure. Analysis of the data indicated that the encoder-decoder differences found in the main results were not simply differences in specific vocabulary, but included differences in the structural level as well.

Beyond the use of the cloze technique to study the verbal planning procedures involved in encoding and decoding, these studies have little in common. The subjects varied in age, sex and race, the studies were conducted in different cultural settings, the mode of presentation was sometimes oral, sometimes written, and the procedures for testing varied from study to study. The fact that even with all these variations, these studies were all able to give some

support to Bernstein's hypothesis of socio-linguistic codes, would demonstrate the generality of social class differences in the encoding and decoding of messages.

Although the cloze technique is one way of looking at the verbal planning procedures, it is not the only technique available. Another way of examining these procedures is to break down the linguistic and extra-verbal components of speech. This is the procedure that is preferred by Bernstein, since he defines the codes in terms of the probability of predicting which structural elements will be selected for the organization of meaning. According to Bernstein (1962b, p. 233):

> The structural elements are highly predictable in the case of a restricted code, and much less so in the case of an elaborated code. It is considered that an elaborated code facilitates the verbal elaboration of intent, whilst a restricted code limits the verbal expression of intent . . . the community of like interests underlying a restricted code removes the need for intent to be verbally elaborated and made explicit. The effect of this on the speech is to simplify the structural alternatives used to organize meaning and restrict the range of lexicon choice.

In other words, class groups are differently oriented in their structural selections and lexicon choices, which when analyzed, should demonstrate differences in verbal planning.

Non-Verbal Components of Speech

The two speech codes, elaborated and restricted, are differentiated by the use of linguistic and para-linguistic components of communication. The linguistic or verbal components include messages in which the meanings are

mediated by words: their selection, combination and organization, whereas para-linguistic components of speech include such non-verbal communication as the mode of presentation and the pitch, stress and rhythm of the speech.

Of all the possible extra-verbal components of communication, only one has received much attention: the rhythm of speech as characterized by hesitation phenomena. The relationship between hesitation phenomena and length of utterances in speech was investigated by Goldman-Eisler (1954). The research was originated and developed by Goldman-Eisler as a way of discriminating between speech samples in non-linguistic terms. Bernstein (1962a) hypothesized that there would be social class differences in the mean pause duration between utterances which would be associated with socio-linguistic code usage.

The following predictions were made about the hesitation phenomena associated with elaborated and restricted codes when speakers were subject to a group discussion situation.

1. With verbal and non-verbal intelligence constant, working class groups would pause less frequently and spend less time pausing than middle class groups.

2. With non-verbal but not verbal intelligence controlled, predictions are the same as hypothesis 1.

3. Irrespective of intelligence, the hesitation phenomena of working class subjects would be similar.

Bernstein's sample included 15-18 year old males who were asked to discuss the topic of capital punishment. Utterances were separated into long and short with only the long utterances being studies since Goldman-Eisler (1954) found that hesitation phenomena associated with short utterances were unstable.

In general, results supported the major hypothesis. Differences in mean pause duration per word were found for the class groups matched for non-verbal intelligence. The working class group used longer phrases, a shorter mean pause duration and considerably shorter word length. The same pattern was found at a higher level of confidence for the hesitation phenomena for the overall comparison between class groups, and this relationship also held true when the intelligence profile was held constant.

Bernstein interprets these results as indicative of differences in verbal planning. For example in the comparison between the classes in which the intelligence profile is held constant, the differences are significant. For the middle class group in this comparison, the conditions existed for greater lexicon and structural selection and thus greater appropriateness between the speech sequences and their referents. In conclusion, Bernstein states that the analysis of hesitation phenomena developed by Goldman-Eisler has discriminated between the two codes, has illuminated the nature of verbal planning processes and has

provided an objective means for their assessment.

The fact that the rhythm of speech characterized by hesitation phenomena has been the only para-linguistic component of speech to be studied, is not necesaarily due to oversight. There are obvious difficulties involved in quantifying such items as gestures, facial expressions, or physical set. Throughout Bernstein's work, there are frequent references to the non-linguistic components of language, yet he does not provide any guidelines for analyzing these elements.

Although Bernstein claims that users of a restricted code depend more upon non-verbal communication than elaborated code users, the difference is not easily measured. Rather, restricted code users are presumed to be using extra-verbal signals to convey messages because their speech is characterized by lapses, redundancies, fragments and condensed meanings. Although extra-verbal signalling may accompany elaborated speech, it is not integral to the transmission of the message since the meaning is made explicit by the selection, combination and organization of words.

Linguistic Components of Speech

Of all the areas of Bernstein's research, the most frequently studied involve the use of lexical and grammatical elements. The verbal components of communication are more open to research than such non-verbal forms of communication

as gestures, facial expressions or physical set. It is possible to count parts of speech, to analyze grammar, to measure length and number of phrases and in general to quantify speech production into a form that can be measured and compared to other speech samples.

One of Bernstein's first efforts to put to empirical test his hypothesis of differential use of linguistic components for the two codes (1962b) used the same language samples obtained in his study of hesitation phenomena (1962a). Not all the words spoken were used for the analysis. Repeated words, fragments (false starts, and sequences which on deletion did not alter the meaning), sequences such as 'I mean' and 'I think' and terminal sequences such as 'isn't it', 'you know', 'ain't it', 'wouldn't it', etc. were excluded. The terminal sequences are called sympathetic circularity sequences (S.C.). Grammatical elements were expressed as proportions of the appropriate populations.

No significant differences between the middle and lower class comparisons were found for the proportion of finite verbs, nouns, different nouns, prepositions, conjunctions and adverbs. An analysis of the excluded parts of speech did show some significant differences between groups. The 'I mean' sequences were omitted as they were considered simple reinforcing units of the previous or subsequent sequences and likely to be idiosyncratic speech habits. However, the 'I think' and socio-centric sequences

TABLE I

CATEGORIZATION OF SPEECH SAMPLES

Middle Class groups used a high proportion of the following:

- Subordination
- Passive Voice
- Complex Verbal Stems
- Total Adjectives
- Uncommon Adjectives
- Uncommon Adverbs
- Uncommon Conjunctions
- Egocentric Sequences
- 'of' as a proportion of all prepositions
- 'I' as a proportion of all personal pronouns
- 'I' as a proportion of total number of words
- 'I' as a proportion of total selected pronouns

Working Class groups used a higher proportion of the following:

- Total Personal Pronouns
- Total Selected Personal Pronouns
- 'You' and 'they' combined as a proportion of total pronouns
- 'You' and 'they' combined as a proportion of total number of words
- 'You' and 'they' combined as a proportion of total selected personal pronouns
- 'You' and 'they' combined (selected personal pronouns) as a proportion of total number of words
- Socio-centric Sequences

were not idiosyncratically distributed and their function is different. The 'I think' sequence is used more frequently by the middle class groups, and the S.C. are used much more frequently by the working class groups.

The speech samples were analyzed in terms of a number of lexical and grammatical elements including: subordination, complexity of the verbal stem, passive voice, uncommon adverbs, total adjectives, uncommon adjectives, prepositions ('of' in particular), uncommon conjunctions, and personal pronouns including all personal pronouns and selected personal pronouns (omitting pronouns in deleted sequences).[2]

The breakdown of the subject's speech into these various categories reveals significant social class differences. The results fall into two main groups in terms of the direction of the differences found for the various measures.

No significant differences were found for the proportion of finite verbs, nouns, adverbs, prepositions, conjunctions and the proportion of the selected personal pronoun 'I' to number of words.

The topic of discussion (capital punishment) may have affected some of the elements measured and the relationship with the researcher could have affected the quality and amount of speech. The topic may have had a different significance for the two class groups since identification

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[2]For a more complete description of these categories, see Appendix I.

for the two groups may be different. It should be noted however, that one can identify with the criminal but not necessarily be limited to speech with the characteristics associated with the working class.

A number of researchers including several of Bernstein's associates at the London Institute of Education, have conducted corroborative studies examining the relationship between social class and speech systems. A study by Denis Lawton (1963) is similar to the study by Bernstein (1962b) with the exception of the speech sample itself. Bernstein has already indicated possible shortcomings of using the discussion on capital punishment, and the Lawton study was designed to determine if similar results could be obtained using different material. The groups in Lawton's study were given written material to be completed in silence, and group discussions as well as individual conversations were tape-recorded to give the subjects an opportunity for both descriptive and abstract work.

Although Lawton used a similar grammatical analysis to Bernstein, he added several categories. For instance, he obtained a measure of essay length that was not possible in the discussion situation. Lawton noted a tendency for middle class boys to write longer essays but there were no significant differences in sentence length. Clauses were broken into subordinate, adjective and uncommon clauses. Middle class boys used about 50% more subordinate clauses

and significantly more adjective and uncommon clauses. The other area of deviation from Bernstein's analysis was a content analysis in terms of abstraction and generalization, which were both more prevalent in the middle class group.

The results were not highly significant but in the predicted direction. Lawton noted that the characteristics of Bernstein's restricted code carry over into writing to a far greater extent than might be expected. Not only were class differences evident in vocabulary, but in whole classes of words (adjectives, adverbs, pronouns) and in structures (passive verb forms and types of subordination). In each case, restricted code users select words and structures from a narrower range of alternatives. Although there may not be a direct relationship between written and oral speech, it appears that the restricted code user tends to be limited to a restricted code not only in speech, but in writing as well.

In a more recent article, Robinson and Rackstraw (1967) examined speech samples from a group of five year old children. Up to this point much of the research concerning Bernstein's socio-linguistic codes dealt with 15-18 year old school boys in England. Robinson and Rackstraw were some of the first researchers to examine young children, even though Bernstein had earlier indicated the importance of speech codes to educability.

Speech samples were obtained from the children's responses to three questions. Inter-group comparisons were made of variations in the linguistic and word preferences in their responses. Middle class children especially those with high IQ scores, used more abstract structures and words, less self-referential speech, more precise words and were more likely to summarize in their answers. These results are quite similar to those noted by Bernstein (1962b) and Lawton (1963).

Bernstein (1962b) and Lawton (1963) have shown that there exist inter-class differences in the use of a number of grammatical categories. Since nouns, adjectives and pronouns can be conveniently brought together under the concept of the nominal group, Hawkins (1969) thought that a detailed grammatical study of this element might provide interesting results. Five year old children were shown a series of pictures and postcards which the child was asked to describe.

The results of the analysis indicated that there was a broad tendency for the middle class to use the noun and its associated forms more frequently while the working class children made greater use of the pronoun and forms associated with it. These results are consonant with the predictions obtained from Bernstein's theory of socio-linguistic codes. What appears to be happening according to Hawkins, is that the middle class children are being more

specific and more elaborated in their responses. They are referring to the objects and the characters by name, not by the vague 'he', 'she', 'it', or 'they'.

Another area of distinction between restricted and elaborated codes lies in the use of function words (conjunctions, prepositions, negation, etc.). According to Bernstein (1962a) lower class groups use significantly fewer function words. To test this hypothesis, Schutz and Keislar (1972) investigated the immediate recall of nouns, verbs and function words using a word analogue to the digit span memory test. In general, lower class children showed a significantly greater recall of verbs and nouns than of function words.

A study by Williams and Naremore (1969) was one of the first attempts to apply Bernstein's thesis to social class differences in the language of the disadvantaged child. Results of the study indicated reliable social class differences on a variety of indices, specifically that children from the high status sample tended to employ more, and more elaborated, syntactic patterns. In the course of this study, Williams and Naremore make some interesting points regarding interpretation of results. In an earlier paper, Bernstein (1962b) indicated that the topic may influence speech. This idea is investigated in this study as Williams and Naremore found that the use of syntactic forms varied according to the topic of discourse. Their point is that

language obtained in interviews is interpreted as a reflection of the child's capabilities or competence rather than as a reflection of how such capabilities were brought to bear in meeting the demands for speech on a given topic.

Of all the studies yet mentioned, none has contradicted Bernstein's hypothesis regarding the existence of elaborated and restricted codes. However, a very interesting and provocative article by P. R. Hawkins (1973) questions these codes. Hawkins proceeds on the premise that there are differences in the frequency with which syntactic patterns are used since the codes have been defined in terms of predictability and the range of syntactic and lexical options available. It was anticipated that children higher in the social scale would use patterns associated with complexity and elaboration (defined in terms of use of complex verbal stems, passive verbs and non-spatio-temporal prepositions).

Hawkins' findings indicate that (1973, p. 2):

> There was no evidence that the lower class children were 'verbally deprived' in the sense that they said very little or uttered one word sentences, etc. The correlations of total nominal groups . . . with all indices of social class, were very low in value and showed no significant relationship, i.e. the total output of speech is not affected by social class . . . Secondly, some of the differences in the frequency of complex and elaborate items which we had predicted were actually found, but on the whole we must conclude that they were not found in sufficient quantities to justify the existence of separate codes.

Hawkins' evidence suggests that there are no social class

differences in linguistic competence, that is, working class children have access to as wide a range of syntactic options as middle class children: potentially they can produce and interpret the same set of grammatical sentences, by drawing on an underlying competence which differs very little.

Hawkins noted that where Bernstein's original formulation suggested that a restricted code would be drawn from a predictably narrow range and an elaborated code would draw form a wide range irrespective of the situation, a more cautious formulation in linguistic terms, has been recently proposed by Bernstein (1972, p. 474):

> It is clear that context is a major control upon syntactic and lexical selections, consequently, it is not easy to give general linguistic criteria for the isolation of the two codes. Derivations from the theory would be required in order to describe syntactic and lexical usage by any one speaker in a specific context.

Hawkins suggested another way of formulating the hypothesis which would call for different strategies of communication. That is, given a particular speech function, or context, different speakers by virtue of differences in their social origins, or experiences of role-relationships, etc. may employ different strategies of communication.

Two points emerge from Hawkins discussion of Bernstein's position. First, Bernstein's formulation of the characteristics and definitions of the two codes has undergone some changes from his earlier work. Secondly, Hawkins is not so much in disagreement with Bernstein over the actual observable production of speech as with the assumptions much

of the research has made regarding ability. When seen from this perspective Hawkins is not trying to undermine Bernstein's position, but to point to areas of confusion. The terms elaborated and restricted have undergone some changes in the past decade which make comparisons inconsistent. Hawkins is introducing terminology which is more consistent with recent research and which examines speech in more current terms of competence and performance.

Other Areas of Investigation

Not all studies testing Bernstein's hypothesis of socio-linguistic codes have concentrated upon the actual components (linguistic or para-linguistic) of verbal planning. The studies that follow, have investigated a number of related issues.

Robinson (1965) while investigating the use of restricted speech by working class boys raises the possibility that these boys used a relatively restricted code as a matter of preference rather than inability. When pressure on both working class and middle class groups was to use elaborated codes in a formal letter, social class differences did not appear, but differences did appear in informal letters, and were generaly similar to previous results (Bernstein 1962a, 1962b, Lawton, 1963). This is an interesting idea, since it implies that educability is simply a matter of increasing the use of already existing structures. However this topic is

not pursued in later research and consequently lacks corroboration.

Robinson and Creed (1969) follow a quite different line of inquiry in a later article. In this study, three areas of interest were selected: curiosity and attentiveness, perceptual discrimination, and verbal discrimination. It was predicted that children with elaborated codes would be higher than the restricted code users on these three variables. Results generally confirmed expectations, although the differences were not as great as hoped. According to Robinson and Creed, this is the first demonstration that general differences in language samples with intelligence and social class controlled, are associated with perceptual and verbal discriminations. They suggest further research into behavioral differences in psychological and social psychological test situations between children whose major difference appears to be speech code use.

One study which investigates such a behavioral difference is by Turner and Pickvance (1971) which examines social class differences in the expression of uncertainty in 5 year old children. It was found that middle class children relative to working class children were more likely to use the egocentric sequence (Bernstein's term is socio-centric sequence), certain types of question, refusals, suppositions based upon perception, and in a certain context, hypothetical statements. In every case in which social class

has been shown to be related to the use of expressions of uncertainty, the middle class children used more.

Bernstein's work suggests that the form of socialization typically employed in middle class families is likely to give the children reared in these families greater scope for self-regulation, for operation within a wide range of alternatives. They are encouraged to perceive reality in terms of more than one alternative, in terms of a range of possible interpretations. Turner and Pickvance indicate (1971, p. 323):

> Such socialization procedures are likely to encourage the child to be flexible in his thinking but also may tend to generate anxiety in the child. In either case, they are likely to encourage the use of expressions of uncertainty.

Turner and Pickvance emphasize that working class mothers and their children are not limited in their expressions of uncertainty, but rather that they may tend to use these less in certain contexts.

The maternal influence upon language behavior has been acknowledged for some time. A recent study by Turner (1973) investigates social factors influencing the speech of children aged 5 to 7 years, and the effect of maternal communication and control upon speech. The study provides clear evidence of the relevance of social class to the child's definition of the control situation and his choice of control at both ages. By and large, the social class differences observed in the children's use of control seem to

directly reflect the children's home experiences. Although social class differences for some measures are greater at age 5 than 7, there is little evidence that school exposure brought the children closer together in their choice of control.

In addition to maternal communication and control, family structure may influence a child's speech responses. The rules that a child employs in determining speech may be a function of the family structure as much as reliance upon a particular code. Using similar procedures to Hawkins (1969), Adlams (1973) suggests that some children in an experimental context produce speech or responses which differ markedly from the speech or meanings of other children.

One group of children may apply rules for the creation of context-independent speech, whereas another does this to a lesser extent. Adlams suggests that (1973, p. 2):

> There is nothing inefficient about context-dependent speech or relatively implicit meaning . . . what is important is that different groups of children spontaneously and consistently offer different orders of meaning and different linguistic realizations and that these differences are indicative of different orientations to the setting as a whole.

General Statement of Research Findings

Since Bernstein first formulated his theory of socio-linguistic codes, there have been many studies which have examined various areas within the theory. The model of verbal planning underlies much of Bernstein's research, and

can be examined using the cloze technique or by making inferences from observed usage of linguistic and paralinguistic comparisons, researchers can investigate the application of Bernstein's hypothesis to a wide range of situations. Other areas include the psychological and sociological aspects of the codes. Such studies examine elaborated and restricted code usage in terms of the family structure, maternal influences and control, perceptual and verbal discriminations, curiosity and attentiveness, uncertainty and personal preference. These studies have clarified Bernstein's position and have contributed to a better understanding of the relationship between social class and language usage.

CHAPTER IV

METHODOLOGY

The present study was undertaken in an effort to determine if Bernstein's typology of elaborated and restricted speech codes could be used to differentiate the language usage of individual children in a typical Canadian grade shcool. Since much of the child's success in school is related to verbal proficiency, it was thought that by early identification of those children who lacked access to explicit verbal means of communication, it would be possible to improve their linguistic skills before such deficits became insurmountable.

Specific Aims

The main purpose of the study was to examine the possibilities of using Bernstein's typology to access individual first grade children's speech usage in Canada. The emphasis was upon individual children regardless of social class. It was thought that separation of the children by social class before obtaining speech samples might not differentiate children by language code usage.

This study differs from the general organization of studies investigating linguistic codes in that it is individual children that are of interest rather than groups.

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It was thought that information regarding speech usage of an individual child would be more useful to teachers and educators than examining an entire group. By determining an individual child's language usage, it should be possible to improve the child's deficits more effectively than attempting to alter the language of an entire group of children. The variance of language usage in a group would make it much harder to improve the whole group than it would to work with a single child.

Sample

Twenty, first grade children from Elmwood School in Edmonton participated in the study. The school is located in an area of Edmonton that contains both middle and lower class type housing. It was expected that there would be a mixture of social class in the classroom, and a mixture of elaborated and restricted code users as well. Even if no social class differences are apparent between the children, they may still differ in their use of language. The ages of the subjects ranged from six years two months, to seven years, with the median at six years seven months. There were twelve boys in the sample, and eight girls. All were from the same classroom, which should minimize the effect of differential schooling.

Test Materials

Each child was administered the Children's Apperception Test (CAT) and all comments were recorded by

means of a tape-recorder placed on the desk in front of the child. The CAT is a psycho-sexual test consisting of a series of ten black and white pictures that depict animals in the process of various activities such as eating, sleeping, playing games, etc. The CAT was chosen as a test material for two main reasons. First, it is an established test with directions for its use and with normative, reliability and validity data to support its use. Second, it is very similar to test materials used by other researchers in testing Bernstein's hypothesis of elaborated and restricted codes. Several researchers used picture postcards and series of pictures that form stories (Hawkins, 1969; Adlams, 1973). These items are somewhat like the picture arrangement items of the Wechsler Intelligence Scale for Children in which the child is asked to arrange a series of items to make a story. The CAT pictures are intended to be administered one at a time, and the child asked to tell a story about each picture.

A tape-recorder was used to take down the language verbatim, and the child's responses were later transcribed into written form without the loss of the child's exact phrasing. This method insured that the entire speech sample was taken down intact.

In order to help relax the children and show them what to do, pictures cut out from magazines were shown to the children prior to the test situation, and the procedure

was demonstrated. The responses to these pictures were not included in the analysis.

Test Procedure

Each child was brought into the testing room individually by the experimenter. The task was explained to the child and the child was shown the tape-recorder and how it operated. The experimenter offered to show the child what his voice sounded like if he wanted to hear himself. This procedure was followed in order to minimize the effect of the child knowing his voice was being recorded.

The child was asked to make himself comfortable at the desk, and once he was settled, he was asked a series of questions. The questions were designed to serve a dual purpose. It was intended that the questions would help the child relax and get him used to the testing situation, and they were intended to obtain some background information. Examples of the questions were:

Hello. What is your name?
How old are you?
When is your birthday? Do you know what month it is?
Do you have a big family? How many brothers and sisters do you have?
What do you think we are going to do today?

Following the questions, the child was shown one to three pictures from magazines to demonstrate the procedure. When the child appeared to have the idea of what was expected, he was shown the first plates of the CAT (animal form) and asked to tell a story about the picture. Instructions for

the administration of the test were followed except that the test was not scored as a psycho-sexual test. The entire test was used.

Testing was conducted in the nurse's office at the school. The test time took about thirty minutes per child, although some children took as little as twenty minutes to complete the test, while others took more time. Each child was interviewed individually.

Analysis of Data

The verbalizations of each child were categorized according to the criteria established by Bernstein (1962b). This breakdown consisted of counting various grammatical and lexical elements and expressing them as a proportion of total number of words or as proportions of their respective populations. The classifications under consideration were: subordination, complexity of verbal stem, passive voice, adverbs, uncommon adverbs, adjectives, uncommon adjectives, conjunctions, uncommon conjunctions, prepositions ('of' in particular), personal pronouns, selected personal pronouns, 'I think', and socio-centric sequences.[3]

The frequent use of subordinations, complex verbal stems, passive voice, total adjectives, uncommon adjectives, and 'I' as a proportion of all personal pronouns, selected pronouns, and total number of words, is associated with elaborated speech. Restricted speech is characterized by

[3]For a more detailed description of these categories, see Appendix A.

socio-centric sequences, a larger proportion of total personal pronouns, and selected pronouns, particularly, 'you' and 'they'.

The speech samples of the children were categorized according to Bernstein's criteria. Since each child told a total of ten stories, it was decided to express the children's speech in terms of the mean number of words used for each story. This would make the study more similar to Bernstein's (1962b) in that Bernstein only gave his subjects one topic to discuss, while the CAT contains ten. Bernstein noted (1962b) that the topic of discourse may influence speech production. By using all ten pictures of the CAT and listing the speech samples according to mean number of words per story, the effect of any one topic on the speech production of the child was minimized.

The breakdown from the children in the elementary school sample from Elmwood School in Edmonton is given, in Table II. The above classification was adhered to throughout.

Statement of Results

Some interesting observations can be made about the individual children's responses compared to what Bernstein predicts for groups. Bernstein (1962b) indicated that middle class children use significantly more subordinations; complex verbal stems; passive voice; adjectives; uncommon adjectives; uncommon adverbs; uncommon conjunctions; 'of' as a proportion

of all prepositions; and 'I' as a proportion of personal pronouns, selected pronouns, and total number of words. On the other hand, Bernstein indicated that lower class children use significantly more personal pronouns; selected personal pronouns; socio-centric sequences; and 'you' and 'they' as a proportion of total pronouns, total number of words, and total selected personal pronouns.

When the speech samples from the present study were categorized according to Bernstein's criteria, some of the categories contained few or no entries, including the passive voice, uncommon adverbs, uncommon conjunctions, 'of' as a proportion of all prepositions, select personal pronouns, 'I think', and socio-centric sequences. Of these, all but the select personal pronouns and socio-centric sequences are associated with elaborated codes.

The fact that none of the children used the passive voice is not too surprising since the task was to describe and tell a story about pictures. Invariably, the children interpreted what they saw in the pictures actively, and used the present tense for narration. Since few children used adverbs in this sample, it is to be expected that few used uncommon adverbs. The same was true for conjunctions: the relative use of conjunctions to total words was small and the conjunctions Bernstein included as uncommon are not used frequently in adult speech.

TABLE II

ANALYSIS OF CHILDREN'S SPEECH

Subject #	Subject #	X Words per Story	X Words per Story	Subordination	Complexity of Verbal Stem	Passive Voice	Adverbs	Uncommon Adverbs
1	1	45	45	5.00	.22	-	.04	-
2	2	30	30	10.00	-	-	-	-
3	3	35	35	7.00	.40	-	.08	.03
4	4	46	46	7.67	.17	-	.02	-
5	5	38	38	6.33	-	-	-	-
6	6	30	30	6.00	-	-	-	-
7	7	33	33	8.25	-	-	-	-
8	8	59	59	5.36	-	-	-	-
9	9	36	36	5.14	-	-	-	-
10	10	43	43	3.90	.18	-	-	-
11	11	23	23	7.67	-	-	-	-
12	12	21	21	7.00	-	-	-	-
13	13	20	20	5.00	-	-	.05	-
14	14	19	19	6.33	-	-	-	-
15	15	15	15	7.50	.50	-	-	-
16	16	7	7	7.00	-	-	-	-
17	17	10	10	5.00	-	-	-	-
18	18	32	32	6.40	-	-	-	-
19	19	15	15	5.00	-	-	-	-
20	20	11	11	5.50	-	-	-	-
X	X	28.4	28.4	6.35	.07	-	.01	.002

TABLE II (Continued)

Subject #	Subject #	Adj.	Uncommon Adj.	Conj.	Uncommon Conj.	Prep. 'Of'	Pers. Pronoun	Select P.P.'s	'I think'	S.C.
1	1	.20	.07	.04	-	-	1.00	.11	-	.10
2	2	.33	.06	.06	-	-	-	-	-	-
3	3	.14	-	.09	-	-	.40	-	.20	-
4	4	.30	.11	.09	-	.5	-	-	-	-
5	5	.29	.13	.05	-	.33	.33	-	.10	-
6	6	.20	.07	.17	-	-	-	-	-	-
7	7	.33	.15	.03	-	-	.33	-	.10	-
8	8	.27	.05	.10	-	-	1.00	.10	.10	-
9	9	.17	-	.14	-	-	.33	-	.10	-
10	10	.17	.05	.05	-	-	.22	.05	-	-
11	11	.26	.17	-	-	-	-	-	-	-
12	12	.24	.05	-	-	-	-	-	-	-
13	13	.10	-	.05	-	-	-	-	-	-
14	14	.21	-	-	-	-	-	-	-	-
15	15	.27	-	-	-	-	-	-	-	-
16	16	.29	.14	.14	-	-	-	-	-	-
17	17	.10	-	-	-	-	-	-	-	-
18	18	.25	.06	.03	-	-	-	-	-	-
19	19	.13	.07	.07	-	-	-	-	-	-
20	20	.27	.08	.08	-	-	-	-	-	-
X	X	.23	.06	.06	-	.04	.18	.01	.03	.005

Another category, the use of the preposition 'of', which is supposed to be indicative of an elaborated code, had only two entries. Only five children out of twenty used the expression, 'I think', and five used complex verbal stems. All these categories are associated with the use of an elaborated code. If the same children had used these elements, it would be possible to indicate the children who are using elaborated codes. However, the use of the elements was scattered among the entire sample.

The fact that some categories associated with elaborated codes are empty or near empty does not mean that all the children were limited to a restricted code. For instance, the nature of the task appears to have precluded the use of the passive voice, so the absence of the passive is not necessarily significant. Also, it is possible that the six to seven year old child's ability to verbalize thought is not developed as extensively as adults or even the fifteen to eighteen year old British school boys in Bernstein's sample (1962b).

Although none of the children in the present study used all of the elements of an elaborated code, several used three or four of the main elements. The clear-cut differences Bernstein found between social class groups in Britain were not observed for the individuals in the present study. For example, subject #1 used several of the elements of elaborated speech such as subordination, complexity of verbal stem, total

adjectives, and uncommon adjectives. However of these elements, only complexity of verbal stem and uncommon adjectives were above the mean for the group as a whole. In addition, he was also the only child who used a socio-centric sequence and was significantly above the mean for the categories of personal pronouns and selected personal pronouns, all of which are characteristics of restricted speech.

Not all the individuals in the study demonstrated such a mixture of elaborated and restricted elements. For example, subjects #3 and #4 both were above the group mean on most of the measures of elaborated code use. A number of subjects were above the group mean for three or more of the categories associated with an elaborated code including #2, #3, #4, #5, #7, #11, #15, #16, and #18.

Only two subjects other than subject #1 used two or more of the elements associated with a restricted code, subjects #8 and #10. Both were above the mean in use of personal pronouns and selected personal pronouns. With the exception of the use of the complex verbal stem, subject #10 appeared to be using a restricted code in the context of this study. Subject #8 also appeared to be limited in the use of elaborated forms with the exception of the use of the phrase 'I think' and total adjectives which were above the mean for the group.

Three subjects were below the mean on all measures, elaborated and restricted, #13, #14, and #17. These results may be related to the relatively low production of speech in response to the stimulus pictures. However, low production does not mean a child will necessarily use a restricted code. Subject #14 did not use any elements of restricted speech, but used subordinate structures, adjectives and uncommon adjectives above the mean level even though he only used an average of seven words per picture.

In addition to the subjects already discussed, there was a group of children that used one or two of the elements of an elaborated code, and one or no elements of a restricted code: #6, #9, #12, #19, and #20. Of these, only subject #9 used an element of a restricted code (personal pronouns). If the absence or near absence of the use of the elements associated with an elaborated code means that a child uses a restricted code, then these children as well as subjects #8, #10, #13, #14, and #17 all used restricted codes in the context of this study.

This would mean that in this study, ten children used a restricted code, two children used an elaborated code (#3 and #4), seven children appeared to be using an elaborated code part of the time (#2, #5, #11, #7, #15, #16 and #18), and one child appeared to be using the two codes interchangeably (subject #1).

CHAPTER V

HINDSIGHT AND FORESIGHT

Theoretical Considerations

Over the past decade, Bernstein and his colleagues have built a strong case for the importance of studying children's language in terms of restricted and elaborated codes. However, there are some difficulties in replicating Bernstein's experiments that are not readily apparent. For instance, the two codes do not necessarily represent opposite poles of a continuum, that is, a characteristic of one code does not always have it's opposite in the other thus making scaling of the characteristics difficult if not impossible.

Bernstein does not set up readily decipherable guidelines for deciding how much of any one characteristic must be present in the speech sample before it is counted. In the present study, it was decided to count any characteristic which was above the mean for the group of twenty grade one children. This resulted in some children who used a small number of any particular characteristic, not being scored if their score was below the mean.

In his early work, Bernstein emphasized that it was not the presence of one or two characteristics that indicate that a person is using one code or another, but the

presence of all the characteristics. If this definition is applied to the present study without alteration, then none of the children were using elaborated speech. This however, is not the impression the experimenter got from listening to the children and recording their responses. There appear to be times when one or more characteristics would not appear such as the passive voice not being apparent because the nature of the task precluded it. This does not mean that the children could not use the passive form, but that this situation did not elicit it.

If the presence of all characteristics is needed to establish the use of either a restricted or an elaborated code, then only one of the children in the present study was doing so. Subject #1 was the only child who used all the characteristics of restricted speech. This subject also used many characteristics of elaborated speech. It is not clear just how Bernstein would classify this subject. None of the children used all the characteristics of elaborated speech. This means that nineteen out of twenty children in the study used neither a restricted nor an elaborated code. Such an alternative has not been discussed in the literature, but in this study there are indications of variation within each code.

These anomalous findings in the present study are due to the fact that this is the first study to examine individual children using Bernstein's differentiation of restricted and

elaborated speech. Differences in speech usage between groups are much more likely to be significant than individual differences. The usual technique for examining code differences is to take two groups differing in social class and obtain speech samples which are analysed on a number of variables. Significant differences for the groups in the use of grammatical and lexical structures are noted, and conclusions drawn about the nature of speech usage for the two groups.

In order to differentiate between individual children, it appears that not all of the characteristics of a code need to be present. It is possible to talk about a child who is using more elaborated speech than another child, for example child #4 is more 'elaborated' than child #10 since child #4 used four of the characteristics of an elaborated code whereas child #10 used none. In this way, one child could be compared to another.

Logically, it would seem to be far more valuable to discuss the speech performance of an individual child than to compare groups differing in social class. There can be little doubt that working with an individual's language difficulties is more promising and more productive than working with a group of children whose defficits may vary greatly from child to child. Being able to identify an individual child's particular weaknesses, teachers and educators can more readily arrange work and organise programs

that would develop a child's deficits and build upon his strengths.

Practical Considerations

There are several inter-related factors that have influenced the results of the present study, which should be taken into consideration in future studies of this type. These factors include (1) the experimental situation, (2) location of the testing, (3) familiarity of the child with the experimenter, and (4) the nature of the test materials.

Due to the limited amount of verbalization in this study, the experimenter questioned whether the testing situation provided an optimal environment for obtaining good speech samples. The experimental situation was engineered in an attempt to obtain examples of elaborated speech from the children providing they could use an elaborated code. To be certain that this type of situation actually did obtain the maximal amount of elaborated speech, samples of the children's speech in a variety of situations might be taken and compared.

The room in which the present study was conducted was ideal in that it was private and fairly quiet. However, since it was the nurse's office, there may have been some reluctance on the part of the children to relax and talk. A clear example that the role of the experimenter was confused with the nurse was given by one boy who asked if he had to get a shot that day.

Some children appeared reluctant to sit and talk to a relative stranger. The children's teacher had explained to them the general nature of the task, but some children were quite reserved when alone with the experimenter. Better samples may be obtained if the experimenter is familiar to the child.

To most of the children, the test materials did not appear to be very exciting, and their 'stories' were really more of a description of the action in the picture. The magazine pictures that the experimenter had selected as practice material appeared to elicit more interested responses than the Children's Apperception Test (CAT). These magazine pictures were not included in the analysis since they were not established test materials and were intended only as demonstration items. In further studies, however, test materials might be chosen that would appeal more to grade one children. The CAT pictures were simple black and white drawings. Colored pictures with more detail in them could possibly elicit more elaborated responses.

These considerations may improve future studies which attempt to investigate individual children's use of speech. Bernstein's criteria may need to be somewhat modified in the future in order to allow for smaller differences between individuals than for groups of children differing in social class. For instance, the appearance of a certain number of characteristics of an elaborated code could indicate degree

of usage of an elaborated code rather than noting the presence or absence of the code.

In this way educators and teachers would be able to use Bernstein's differentiation of speech usage to identify the speech deficits of individual children's speech, and build up those deficits. Ideally, all children should have access to elaborated speech in order to have the widest range of choices for the future, since the code the child uses orients him to a certain way of thinking and towards a certain social structure. A child should have the chance to choose how his future develops and should be able to be mobile in his society if he so desires.

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APPENDICES

APPENDIX A

Bernstein's (1962b) Classification of Grammatical Elements (A Summary)

APPENDIX A

BERNSTEIN'S (1962b) CLASSIFICATION OF GRAMMATICAL ELEMENTS

'I Mean'

This sequence was excluded from the analysis as it was considered a simple reinforcing speech habit.

'I Think'

This sequence is not idiosyncratically distributed, and appears more frequently in middle-class speech.

Sociocentric Sequences

These sequences include terminal sequences such as 'isn't it', 'you know', 'ain't it', 'wouldn't he', etc. and are used more frequently by the working class.

Subordination

Any sequence which contained a finite verb was counted. The implicit verb at the beginning of an utterance was not counted. When two finite verbs were associated with the same subject this counted as two propositions. If the number of such finite verbs is then divided into the total number of analysed words a mean proposition length is obtained.

Complexity of the Verbal Stem

This count was based upon the number of units in the verbal stem excluding the adverbial negation. Verbal stems containing more than three units were counted for each subject and expressed as a proportion of the total number of finite verbs. A verb plus an infinitive was counted as a complex verbal stem.

Passive Voice

This count was made by dividing the total finite verbs by the number of passive verbs.

Adverbs

Adverbs were counted and expressed as a proportion of total analysed words.

Uncommon Adverbs

An arbitrary classification was used to distinguish uncommon adverbs. Adverbs of degree and place, 'just', 'not', 'no', 'then', 'how', 'really', 'yes', 'when', 'why', were excluded from the total number of adverbs and the remainder excluding repetitions, was expressed as a proportion of the total number of analysed words used by each subject.

Adjectives

Adjectives were counted and expressed as a proportion of total analysed words.

Uncommon Adjectives

An arbitrary classification was used to distinguish adjectives. Numerical and demonstrative adjectives and 'other' and 'another' were excluded from the total number of adjectives and the remainder, excluding repetitions was expressed as a proportion of the total number of analysed words used by each subject.

Prepositions, 'of'

The relative use of 'of' was assessed by expressing the proportion of 'of' in relation to 'in' and 'into', excluding 'of' in 'sort of'.

Conjunctions

Conjunctions were counted and expressed as a proportion of conjunctions to total number of words.

Uncommon Conjunctions

An arbitrary division was made. All conjunctions other than 'and' 'so', 'or', 'because', 'also', 'then', and 'like' were classified uncommon and the result was expressed as a proportion of total conjunctions.

Personal Pronouns

This category includes all personal pronouns including those in the "I think" and sociocentric sequences. Personal pronouns were expressed as a proportion of total pronouns.

Selected Personal Pronouns

This category includes all personal pronouns excluding those in the 'I think' and sociocentric sequences. Selected personal pronouns were expressed as a proportion of the total number of analysed words.

Total Analysed Words

All words excluding fragments, repetitions and the 'I mean', 'I think', and sociocentric sequences.

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